

MiVoice MX-ONE

CPI News - Product Revision Information

Release 7.4

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CPI News in MiVoice MX-ONE 7.4

This document describes changes in the MiVoice MX-ONE documentation due to new and changed functionality in MiVoice MX-ONE 7.4 compared to MX-ONE 7.3 SP3. It also lists the Mitel re-branded product names versus the previous product names.

For detailed information on the MX-ONE 7.4 Solution, see *MiVoice MX-ONE Solution Overview*, *MiVoice MX-ONE System Description* and other CPI documents.

Mitel Branding and Names

Branding

NOTE: Some documents contain old names and brand, for example name of configuration files and links. These will be phased out over time.

System Requirements

The following are the system requirements for MX-ONE 7.4 system:

- Operating System - SLES 12 Service Pack 5
 - Newer kernel
 - Postgres
 - openssl
 - openssh
- Application Server update
 - Wildfly 20
- Web Server
 - IPP Server 2.9
 - TLS 1.3 support and default HTTPS support for SNM and PM at installation
- Hypervisor
 - VMware ESXi 6.7 and 7.0 support
 - Hyper-V Support
 - KVM support (RedHat 7.6 and SUSE SLES 12 SP5 or later)
- MS Azure
 - MS Azure and Azure Stack HCI

New and Enhanced Features, MX-ONE 7.4

This section provides information on the new and enhanced features for MiVoice MX-ONE 7.4 release.

NEWS and Changes in Documents, MX-ONE 7.4

This section provides information on the new and enhanced features for MiVoice MX-ONE 7.4 release.

Mixing Personal Number List with Diversion

When a Personal Number list is active, a user cannot set or change the diversion on busy via MiCollab (it is ignored). What is set in the Personal Number list, will override whatever is set using MiCollab. Therefore, it needs a change in the Personal Number list configuration settings (in PM or via CLI) to allow the same option for Diversion on Busy as is available for Diversion on not available.

Activating the deflected-to party parameter, any type of Diversion can be activated (except when call_list option --call-list-cdiv is not 0000, then the call follows according to the diversion settings) or Do Not Disturb (and no DND option has been defined).

For more information about diversion settings, see the following documentation:

- MiVoice MX-ONE Personal Number - Description

Introduction of MX-ONE Support for Section 506 of Ray Baum Act and Kari's Law (only valid for USA market)

In August 2019, the USA government adopted rules for implementing two federal laws that strengthen emergency calling: Kari's Law and Section 506 of Ray Baum's Act.

The Multi-line Telephone Systems (MLTS) - Kari's Law and Ray Baum's Act 911 Direct Dialing, Notification, and Dispatchable Location requirements are described in the following link:

<https://www.fcc.gov/mlts-911-requirements>

Frequently Asked Questions (FAQ) about the Ray Baum's ACT can be found at the following link:

<https://www.fcc.gov/files/mltsfaqspdf>

The MX-ONE implements Ray Baum's Act in conjunction with NG911 providers as the MX-ONE 911 solution alone does not satisfy the legislated requirements for Ray Baum for all non-fixed devices.

For Kari's Law requirements, the MX-ONE can be pre-configured for the direct dialing of 911 (emergency calls), without having to dial any prefix or access code. The 911 calls are sent via SIP trunk to the NG911 provider and the NG911 provider will redirect to the appropriate Public Safety Answering Points (PSAPs) based on the Civic Address of the location as identified by the NG911 provider.

For more information about Ray Baum support, see the following documentation:

- MiVoice MX-ONE Ray Baum MX-ONE Emergency Services Description - Kari's Law and Section 506 of Ray Baum's Act
- MiVoice MX-ONE Emergency Services and Ray Baum Integration with RedSky

T.38 Relay in Media Server

Media Server does not support T.38 protocol as compared to the Media Gateway Unit (MGU/MGU2). However, T.38 packets sent over User Datagram Protocol (UDP) can still be relayed between two T.38 endpoints (for example, between a MGU and another T.38 GW or Fax) whenever forced gateway sessions are established through the Media Server.

For more information about T.38 Relay in Media Server, see the following documentation:

- MiVoice MX-ONE Media Server – Description

Support Gratuitous ARP in MGU

The MGU SW has been updated to support changing the destination MAC-address for an ongoing RTP stream when receiving a Gratuitous Address Resolution Protocol (GARP), IPv4, and unsolicited Neighbor advertisement.

For more information on Emergency Location, see the following documentation:

- MiVoice MX-ONE Media Gateway Unit, MGU - Description
- MiVoice MX-ONE Media Gateway Unit, MGU2 - Description

MGU to Send Alarm for Out of Resources

A new MGU Resource Warning alarm (5:34) code is introduced in MX-ONE system that sends alarm when the MGU discovers that there is low or no resources. The new alarm may get generated due to one of the following reasons.

- **Low SPU resources in the Media Stream Processor:** set when the load of the MSP SPU goes above 70% and will be cleared when the load goes below 60%.
- **Low ARM Resources in the Media Stream Processor:** set when the load of the MSP ARM goes above 70% and will be cleared when the load goes below 60%
- **No Free Time-slots:** set when there is no free time-slots in the MGU. This needs to be cleared when there are 10 or more free time-slots.
- **Media Stream Processor (MSP) is Out of Resources:** set when there is no more resources left in the MSP. It will be set when there is 10 consecutive valid accesses against the MSP without having out of resources.

For more information on MGU Resource Warning Alarm, see the following documentation:

- MiVoice MX-ONE Fault Codes - Fault Tracing Directions

Configuration of Allowed Hosts for SSH Login to MGU

It is now possible to limit the access to the MGU by configuring a list of allowed host addresses and/or networks for remote (SSH) login for IPv4 and/or IPv6. This is done by executing the mgu-setup command.

For more information on Emergency Location, see the following documentation:

- MiVoice MX-ONE Media Gateway Unit, MGU2 - Description

Add and Remove Server

A new document is added to the CPI library that describes how to add and remove server in the MX-ONE system.

For more information, see the following documentation:

- MiVoice MX-ONE Add and Remove Server - Operational Directions

MX-ONE Service Node

The following are the Service Node Enhancements for MX-ONE 7.4 system:

Handling of mxone_data and mxone_global data

There are two locations where the data is stored in the MX-ONE Service Node. Mxone_data (profile data) and mxone_global (semi-permanent data).

The semi-permanent data holds information about currently active feature, and it means that the active feature data will not be lost at system actions as system upgrade, LIM/system reload, power failure and switch-over to standby server. Once the system is back in service, the active feature will be the same as before the system action.

For more information on semi-permanent data, see the following documentation:

- MiVoice MX-ONE MX-ONE API, CSTA III - Interface Description
- MiVoice MX-ONE Call Diversion - Description
- MiVoice MX-ONE Remote Extension - Description
- MiVoice MX-ONE System Database (Cassandra) - Description
- MiVoice MX-ONE Technical Reference Guide, Unix Commands

Allow TSS to Create and Select User-defined Number

This feature allows Terminal Selection Service (TSS) to create user-defined number where a user can create a number that can be selected and can be used as a full fledged remote extension, call from that remote number will be seen as an internal user number.

The user can overwrite user-defined number when added new user-defined from CSTA or MiCollab.

For more information about TSS user-defined number, see the following documentation:

- MiVoice MX-ONE MX-ONE API, CSTA III - Interface Description
- MiVoice MX-ONE SIP Extension - Description
- MiVoice MX-ONE Technical Reference Guide, Unix Commands – Description

SNMP Emergency Call location Information Enhancements in MX-ONE

This new alarm is introduced to modify the Emergency Call function to support the MMN or Mitel Revolution application better.

By these enhancements, one can manually set location information for end-points that do not support that information (for example, analog phones, DTS phones and other legacy non-IP terminals/clients).

Using this new alarm, the user can create a location-table in MX-ONE where location data for each device can be stored. If the device is a SIP phone that can get location information from the LAN, then that location data shall over-rule that terminals location-table data.

This also allows to set, change, delete, and print location data in the location-table, for multiple ranges of end-points in one go.

For more information on Emergency Location, see the following documentation:

- MiVoice MX-ONE Technical Reference Guide, Unix Commands

Introduction of SIP Phone 6.1.0 and 6905 and 6910 with MX-ONE

The newly merged SIP phone 6.1.0 (renamed from 5.3) is introduced both with MX-ONE 7.3 SP3 and 7.4. These phones are a part of 6900 family and are included with some more new functionalities and smaller changes in GUI.

In addition to this, the lowend phones 6905 (including wall mount unit) and 6910, plus support for the S720 speaker unit for the 6900 phones (including S720 USB Bluetooth Adapter and AC Adapter) are also introduced.

For more information about SIP Phone 6.1.0 and 6905 and 6910 phones, see the following documentation:

- Mitel 6905 SIP Phone for MX-ONE, Quick Reference Guide
- Mitel 6910 SIP Phone for MX-ONE, Quick Reference Guide
- Mitel 6905 SIP Phone for MX-ONE, User Guide
- Mitel 6910 SIP Phone for MX-ONE, User Guide

Idle Delay Timer for Group Hunting Member

A new `--idle-delay-time` parameter is added in the `extension_profile` command. The delay time needed by the mobile network between two calls. Used by remote extensions over SIP and ISDN when needed.

A RXN is the only member of a hunt group that is configured so that the member never becomes unavailable. The member does not answer the call and after the ring timeout the next call is accepted with the delay set by this timer.

For more information about `--idle-delay-time`, see the following documentation:

- Technical Reference Guide, Unix Commands Description

Removal of CAT and Replacement with CSP both for Extension Groups and Legacy Extensions

The Common Service Profile (CSP) code and Group Common Service Profile (GCSP) code must be used when initializing the categories for extension groups and legacy extensions (ATS, DTS, IXN). A group common service profile can be assigned with a name. Now, all extensions share the same common service profile, parameters CAT, CDIV, SERV and TRAF are removed from EX, KS, IT and RA commands and replaced with CSP.

There are commands to initiate, change and remove the directory number (pilot number) for an extension group. The selected Group Common Service Profile code must be entered in the initiation command. The GCSP code can be changed by the alteration command. The GCSP cannot be associated with customer group. The extension group directory number with the assigned Group Common Service Profile code can be printed out for a given group directory number.

The Group Hunt (GH) commands are removed and replaced with `extension_group`, `extension_group_member` commands. New command `extension_group_profile` is used to create a extension group common service profile used by groups. `SERV` and `TRAF` parameter is removed from `AC`, `CB`, `NS` and `NC` commands and replaced with parameter `EGCSP`. Parameter `TPCS` removed from `AC` commands. Parameter `CLT` and `RGTIME` removed from `GH` command and moved to command `extension_group_profile`.

Parameter `CAT` is also removed from command `auth_code`. Command `extension_profile` has a new parameter `--ext-legacy` for setting Automatic Call Distribution supervisor functionality on DTS. The CSP used for DISA calls can be set with command `global_traffic_data` base on customer group. The number of CSP is increased to 500. The number of characters in group common service profile name is 30.

For more information about Common service profile for extension groups, see the following documentation:

- Technical Reference Guide, MML Commands Description
- MiVoice MX-ONE Technical Reference Guide, Unix Commands – Description
- MiVoice MX-ONE Commands in MX-ONE Service Node Command Description
- MiVoice MX-ONE Fault Location – Fault Tracing Directions
- MiVoice MX-ONE Analog Extension, EX - Operational Directions
- MiVoice MX-ONE Authorization Code for Extension - Description
- MiVoice 4225 Office (DBC 225) for MiVoice MX-ONE
- MiVoice 4422 IP Office (DBC 422) for MiVoice MX-ONE
- MiVoice 4420 IP Basic (DBC 420) for MiVoice MX-ONE
- MiVoice 4220 Lite (DBC220) for MiVoice MX-ONE
- MiVoice 4223 Office (DBC 223) for MiVoice MX-ONE
- MiVoice 4422 IP Office (DBC 422) for MiVoice MX-ONE
- MiVoice 4425 IP Vision (DBC 425) for MiVoice MX-ONE
- Analog extension, EX - Operational Directions
- Authorization Code for Extension - Operational Directions
- Digital Key System Telephone, KS - Operational Directions
- Free seating - Operational Directions
- Control Telephony Functions - Operational Directions
- Migrating MD110/Mitel TSW to MiVoice MX-ONE 7.x - Operational Directions
- MiVoice MX-ONE Feature List - Description
- Analog Extension for MiVoice MX-ONE Directions for Use
- MiVoice MX-ONE Upgrading or Updating MX-ONE 7.X - Installation Instruction
- MiVoice MX-ONE Hospitality ConnectedGuests Applications - Operational Directions
- MiVoice MX-ONE Emergency Notification - Operational Directions

MiVoice MX-ONE Management Applications

PM and SNM Security Enhancements

The following enhancements have been done in PM and SNM security:

- At new installation, it is mandatory to configure PM and SNM to use security (https). This can be changed later on when installation is completed to preferred settings.
- Autologin to SNM subsystem will be disabled by default at installation or upgrade to MX-ONE 7.4. This can be changed by System Setup Administrator to preferred behavior.
- SNM Last login Information.

Default TLS 1.2 and HTTPS Support for SNM and PM

When PM, SNM, CSTA Webserver and IPP Server are installed; by default, the applications must be configured to HTTPS and TLS 1.2. For this, a certificate must be created, minimum 2048-bits and SHA256. A self-signed certificate needs to be used for the initial 60 days. After that period a valid certificate must be installed or replaced within 60 days. Otherwise, the user will not be possible to access the management applications.

For more information about support of HTTPS and TLS 1.2, see the following documentation:

- MiVoice MX-ONE Installing MX-ONE Provisioning Manager - Installation Instructions
- MiVoice MX-ONE MX-ONE Azure Installation Document

Solution

The following are the solutions integrated with the MX-ONE 7.4 system:

Implementation of New Time-based Licensing with Alarms

There are two types of system licenses implemented: SWA or SoftWare Assurance license and MLA or Managed License Agreement.

SWA or SoftWare Assurance license will raise a warning alarm 30 days before its expiry and another alarm upon expiry. When this license expires, software upgrades will be rejected.

MLA or Managed License Agreement will raise a warning alarm 30 days before its expiry and another alarm upon expiry. When this license expires, software updates will be rejected and even data changes that require a license get rejected.

For more information on time-based licensing alarms, see the following documentation:

- MiVoice MX-ONE Administrator Guide - Operational Directions
- MiVoice MX-ONE Solution Overview - Description
- MiVoice MX-ONE System - Description
- MiVoice MX-ONE Fault Codes - Fault Tracing Directions

Re-introduction of Alarm Code 0:12

The alarm code 0:12 was removed when the LSU/DSU HW was phased out in 2018 (MX-ONE 7.1). Now, the alarm code 0: 12 is added back in the CPI documentation in 7.3SP3 and 7.4.

In domain 0, alarm 12 is added. That is, No connection with device boards in one magazine, see the fault locating directions for FAULT CODE 12.

For more information about FAULT CODE 12, see the following documentation:

- MiVoice MX-ONE Fault Location – Fault Tracing Directions
- MiVoice MX-ONE Fault Codes - Fault Tracing Direction

IPP Server Requires JavaJDK

IPP Server requires Java JDK that runs with OpenJDK. IP Phone Server works with Java provided by Oracle and Azul (OpenJDK).

For more information about IPP Server and OpneJDK, see the following documentation:

- MiVoice MX-ONE IP Phone Software Server - Installation Instruction

Upgrade Cassandra to Latest Version

Cassandra database has been upgraded from version 3.x to 4.x, from MX-ONE version 7.4. Cassandra database refers to the Apache Cassandra TM database. Cassandra is an open-source tool and use Apache License 2. The database functions are dependent on a reliable timeserver (NTP). The MX-ONE system can support up to 40 data centers in a Cassandra cluster.

For more information about upgrade Cassandra database, see the following documentation:

- MiVoice MX-ONE System Database (Cassandra) - Description

Upgrade MX-ONE in KVM to Support Minimum Downtime

In MX-ONE server, you can now configure two service nodes, one on the current server and another on the upgrade to server. During the switch-over, the phones (configured in MX-ONE server) can be moved from the service node on the current server to the service node on the upgrade to server without causing any system interruption, which means, minimum or no downtime for the end-users.

For more information, see the following documentation:

- Virtualization and Public Cloud - Description

Hardware Updates

The following sections discusses the hardware updates in MX-ONE 7.4 system:

Support for the Mitel ASU-III Server Board

The new ASU-III board allows backward compatibility with older MX-ONE installations and can fully replace the ASU-II board. To support older MX-ONE releases on top of the new ASU-III board, the old

system shall be installed on top of a virtualization environment (VMware or KVM) where ASU-II is allowed. MX-ONE system can be installed in ASU-III with 10000 extensions.

The new improved version ASU-III board provides better performance levels compare to the ASU-II. RAM memory is increased from 16 GB to 32 GB RAM and SSD disks will be the default option. This can be configured including Provisioning Manager and Media Server. ASU-III in a 3U chassis can be loaded with other boards (MGU, ELU33, ELU34, and so on).

For more information about ASU-III related updates, see the following documentation:

- MiVoice MX-ONE Engineering Guidelines
- MiVoice MX-ONE System Planning - Description
- MiVoice MX-ONE Installing Boards and Cabling - Installation Instructions
- MiVoice MX-ONE Replacing Boards in MX-ONE Media Gateways
- MiVoice MX-ONE Administrator Guide - Operational Directions
- MiVoice MX-ONE Replacing Miscellaneous Hardware – Operational Directions
- MiVoice MX-ONE Technical Reference Guide, Unix Commands – Description
- MiVoice MX-ONE Replacing Boards in MX-ONE Media Gateways – Description
- MiVoice MX-ONE Remove LIM – Operational Directions

Firmware Updates

New firmware support is available for the following devices or products:

- SIP Phones - 6800 and 6900 Series
- EX and GX gateways
- MGU

For more information, see *MiVoice MX-ONE Solution Product Compatibility Matrix*.

Correction in IP Protocols and Ports

There is a new correction has been done in the System Planning - Description document to support its MX-ONE partner and customer who are newly implementing and accessing MX-ONE ports and protocols for their system. The user can more easily identify and figure out which port needs to be opened and at what direction the connection is initialized from (involved different port entities that are available at different sides of the firewall). A new table is added for the Internally used Protocols and Ports for reference.

For more information about modified IP Ports and Protocols, see the following documentation:

- MiVoice MX-ONE System Planning - Description

Documentation Updates

From release MX-ONE 7.1 onwards, related topics are combined into the following main categories:

- Overview — Provides MX-ONE solution overview and description.
- Planning — Provides planning information such as system planning, site planning, engineering guidelines and so on before you setup MX-ONE system.
- Administration — Provides information on how to administer and run MX-ONE system.
- Install and Upgrade — Provides install and upgrade steps for the MX-ONE system.
- Optional Installations — Provides information on how to perform optional installation such as MPA, MiCollab Advanced Messaging.
- Migration — Provides information on migrating legacy hardware to MX-ONE system.
- Fault Management — Provides fault management and troubleshooting information.
- Feature Guides — Provides descriptions, interworking descriptions, and operation and maintenance information for the various features supported by MX-ONE.
- Devices and Accessories supported by MX-ONE — Provides information on how to install and administer telephones, clients and gateways.

The MX-ONE 7.1 and later documentation is available at [Mitel Document Center](#). The documentation is also available at the [Mitel Infochannel](#) webpage. Note that you must have Mitel credentials to access the Mitel Info Channel webpage.

Only the documentation belonging to the following categories is available in the Mitel Document Center:

- Overview
- Administration
- Install and Upgrade
- Optional Installations
- Feature Guides
- Devices and Accessories supported by MX-ONE

Documentation that belong to the other categories is available only at the [Mitel Infochannel](#) webpage.

Documentation Versioning

The Front Page of the published document contains the title of the respective document and the release number. The release number indicates that the document is updated for that release. However, all the documents in the CPI library are applicable to the current product release.

